Individual difference predictors of transgender beliefs: Expanding our conceptualization of conservatism[☆]

B.J. Rye[a],[*], Olivia A. Merritt[b], Derek Straatsma[a],[c]

[a] St. Jerome's University, University of Waterloo, 290 Westmount Road North, Waterloo, Ontario N2L 3G3, Canada
[b] Department of Psychology, University of Waterloo, 200 University Ave W, Waterloo, Ontario N2L 3G1, Canada
[c] Registered Nurse at London InterCommunity Health, 659 Dundas St., London, ON N5W 2Z1, Canada

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ABSTRACT

With grounding in the Integrated Threat Theory of Prejudice, we explore individual difference predictors of attitudes toward transgender people. In particular, we measure general and gender conservatism, as well as the previously unexplored predictors of erotophobia–erotophilia (comfort with sexuality) and quality of previous contact with sexual minorities. In this North American student sample ($N = 218$), attitudes toward lesbians and gay men (ATLG) correlated strongly with the Transgender Belief Scale ($r = 0.82$), suggesting a lack of differentiation between sexual minority groups. Multiple regression models indicated that participant gender and conservatism (as measured through homophobia, benevolent sexism and authoritarianism) contributed uniquely to transgender attitude prediction. After excluding the ATLG as a predictor, contact quality with sexual minorities, erotophobia–erotophilia, religious fundamentalism, benevolent sexism, and participant gender emerged as predictors of transgender beliefs. Separate gender analyses suggest that benevolent and hostile sexism might function differently in the prediction of transgender attitudes for women and men, respectively. Findings also suggest that secondary transfer via contact with sexual minorities may influence feelings about transgender people. Implications for sex educators are discussed.

1. Introduction

Transphobia or transnegativity describes discomfort with or negative attitudes toward those who identify as *trans*. Trans is a collective term for those whose gender identity, behaviour, and/or expression does not match the sex they were assigned at birth, including those who identify as transgender and gender non-conforming. In contrast, cisgender individuals are those who do identify with the gender they were assigned at birth (Glotfelter & Anderson, 2017). Relative to gay, lesbian, or bisexual (LGB) attitudinal research, scholarly work is sparse regarding attitudes toward trans people (Warriner, Nagoshi, & Nagoshi, 2013). A recent study concluded that trans prejudice was more prominent than prejudice held against LGB people (Cunningham & Pickett, 2018). Attitudes, when transformed into action, can result in stigma and discrimination, a factor that may contribute to the overrepresentation of mental health challenges in trans individuals (Haas et al., 2010). As such, more research is needed to explore the attitudes held toward trans individuals, and what might underpin those attitudes.

1.1. Conceptual framework and predictors of transgender beliefs

Integrated threat theory (Stephan & Stephan, 2000) supposes that a group will express prejudice toward those outgroup members who threaten the groups' values, identity (symbolic threats), or power (realistic threat). Intergroup anxiety and stereotyping also lead to prejudice. Based on this theory, socially conservative individuals would express negative attitudes toward an outgroup who threaten their traditional value systems; applied to the particular situation of trans people, the base belief in the gender binary and consequent desire for gender conformity is threatened (e.g., Broussard & Warner, 2019). Trans individuals – like LGB individuals – challenge gender norms that have historically been characterized as "natural" or are treated as axioms by many conventional individuals (Norton & Herek, 2013). Thus, traditionalists are likely to perceive this violation of norms as threatening and respond with negative attitudes toward trans individuals.

1.1.1. Conservative ideology

Socially conservative ideology is conceptualized as an adherence to traditional values and ideals, which often involves resistance to change, belief in hierarchy, and submission to authority (Christopher & Mull, 2006). Commonly used indicators of conservatism include authoritarianism (Whitley Jr. & Lee, 2000) and religiosity (Stanikov, 2018). Authoritarianism is characterized by the belief that rules should be followed (Altemeyer, 1981), and both religiosity and authoritarianism suggest a desire to maintain traditional structures (van der Toorn, Jost, Packer, Noorbaloochi, & Van Bavel, 2017). Consistent with integrated threat theory, those who are more authoritarian and more religious have been shown to have more negative attitudes toward trans people (e.g., Scandurra, Picariello, Valerio, & Amodeo, 2017, Warriner et al., 2013). Religiosity is most often measured with a single item (e.g., Scandurra et al., 2017), but the Religious Fundamentalism scale (Altemeyer & Hunsberger, 1992) has also been found to be related to transphobia (Nagoshi et al., 2008; Warriner et al., 2013). The relationship between religious fundamentalism and transnegativity differs depending on a variety of participant characteristics (e.g., gender; Garelick et al., 2017; Nagoshi et al., 2008; Norton & Herek, 2013; Warriner et al., 2013).

1.1.2. Gender and sexual conservatism

Although researchers often define conservatism in these general terms, a broader conceptualization of conservatism might be warranted; for example, those who express domain-relevant conservatism – such as gender and sexual conservatism – could also perceive threat when faced with trans individuals. Thus, we would expect that those who hold traditional beliefs about gender roles may be more prejudiced toward trans people. Indeed, both hostile and benevolent sexism have been shown to be related to transphobia, but the relationships are complex (cf., Nagoshi et al., 2008; Warriner et al., 2013). Attitudes toward the gender binary (Norton & Herek, 2013) and adherence to traditional gendered social scripts (Nagoshi et al., 2008) were also related to trans attitudes.

As LGB individuals violate ideas of the gender binary via violation of heterosexual norms, attitudes toward lesbians and gay men may reflect gender and sexual conservatism. Research shows that those who hold negative attitudes toward LGB populations are also likely to hold negative attitudes toward transgender individuals (e.g., Glotfelter & Anderson, 2017). It could be that any "sexual violator" (i.e., a trans person or a queer person) may evoke similar attitudes in those who are conservative in this way (Fassinger & Arseneau, 2007).

A third part of gender and sexual conservatism is comfort with sexual material. Transfolk –because of their gender violation– likely evoke uncertainty with regard to sexuality. However, this element of conservatism has not yet been explored in relation to trans beliefs; thus, the current study includes the measurement of erotophobia–erotophilia, a personality dimension representing an approach-avoidance toward sexual content. In sum, transfolks are often perceived as 'violating' social scripts of gender and traditional male-female sexual encounters ("heterosexism"; Tee & Hegarty, 2006) and would thus be threatening to sexually conservative individuals.

1.1.3. Contact with sexual minorities

The authors of integrated threat theory describe the power of contact with outgroup members to influence attitudes toward these outgroups; specifically, they write that "the amount and especially the quality (positive or negative) of contact with the other group also affects feelings of threat" (Stephan & Stephan, 2000; p. 38). Perhaps positive contact with outgroup members reduces the anxiety and stereotypes which are cited as sources of prejudice by Stephan and Stephan. Regarding trans attitudes, acquaintanceship with a trans person is associated with reduced transphobia (e.g., King, Winter, & Webster, 2009). In fact, having a friend (Scandurra et al., 2017) or knowing someone (Elischberger, Glazier, Hill, & Verduzco-Baker, 2018) who is

gay, lesbian, bisexual, *or* transgender may be a protective factor against transphobia – consistent with the contact hypothesis (Dovidio, Gaertner, & Kawakami, 2003) and secondary transfer theory (Pettigrew, 2009). However, crude contact measures ("yes/no" measures; e.g., King et al., 2009) are commonly used in the available literature; these typically address quantity, but not "quality", of interactions with LGBT individuals. The present study attempts to address this oversight through measurement of interaction quality with sexual minorities.

1.1.4. Participant gender

In line with integrated threat theory, threats to gender norms are thought to be more distressing for males than females. This may be because males hold the power in the gender hierarchy and thus stand to lose more should the hierarchy be challenged (Norton & Herek, 2013). Accordingly, one of the most robust findings in the literature is that males endorse more negative attitudes toward trans people than females (Broussard & Warner, 2019; Costa & Davies, 2012; Garelick et al., 2017; Glotfelter & Anderson, 2017; Nagoshi et al., 2008; Norton & Herek, 2013; Scandurra et al., 2017; Tebbe & Moradi, 2012; Tee & Hegarty, 2006; Warriner et al., 2013; Willoughby et al., 2010).

The literature is also rich with evidence that males and females may have unique predictors when it comes to transphobia. For example, authoritarianism and religious conservatism predicted women's transgender attitudes when LGB prejudice was controlled for, but these were not significant predictors for men's attitudes (Nagoshi et al., 2008). Similarly, Warriner and colleagues found that physical aggression was a significant predictor of transphobia for men, but not women, while benevolent sexism was a significant predictor for women, and not men.

1.2. The current study

This growing area of research suggests that conservatism (broadly conceptualized as including authoritarianism, religious fundamentalism, adherence to traditional gender roles, and/or negative attitudes toward LGB groups) is related to transphobia. *Comfort with sexuality* as a component of conservatism has yet to be studied as a predictor. In addition, contact with sexual minorities seems to be related to reduced transphobia, but the arguably more important variable *quality of contact* has yet to be studied in relation to trans beliefs. Lastly, perceiver gender is an important variable in trans attitudes, and many researchers have shown different predictors for transphobia for men and women. Thus, we plan to conduct separate analyses for men and women in order to detect these potential differences.

More comprehensive models are needed in order to explain more of the variance in attitudes toward trans people. In line with integrated threat theory, we expect our study to replicate previous findings that transphobia is more prominent in those who are male, more religious, authoritarian, homophobic, and sexist. This study also aims to extend our knowledge of transphobia predictors, with a grounding in integrated threat theory; as such, we expect that those who are erotophilic and those who have a history of positive interactions with sexual minorities will show less negative trans beliefs.

2. Method

2.1. Participants

Participants ($N = 218$) from a mid-sized Canadian university were asked to identify their sex as male or female, resulting in 57 males, 160 females, and 1 sex non-response. This was a sufficient sample size (minimum $N = 113$) to conduct multiple regression analyses with nine predictors in order to have enough power to determine a medium effect at 80% power based on Green's (1991) formulation. These were typically-aged university students (mean = 19.6 years), who received course credit for participation. The sexual nature of the study was

Table 1
Descriptive statistics for Transgender Belief Survey (TBS) and individual difference predictor variables.

	All		Men	Women	Test of sex difference[a]
	Mean [95% confidence interval] (sd) N	Potential range min-max alpha	Mean [95% confidence interval] (sd) n	Mean [95% confidence interval] (sd) n	(df) univariate F effect size (η_p^2)
TBS	5.15 [5.02–5.28] (0.97) 217	1–7 2.14–6.62 0.90	4.67 [4.40–4.94] (1.03) 57	5.32 [5.18–5.46] (0.88) 159	(1,216) 20.70*** 0.09
Attitudes toward Lesbians and Gay Men	5.81 [5.67–5.94] (1.01) 217	1–7 2–7 0.92	5.48 [5.17–5.79] (1.17) 57	5.92 [5.78–6.07] (0.93) 159	(1,216)[a] 8.31** 0.04
Sexual Opinion Survey/erotophobia—erotophilia	4.93 [4.79–5.07] (1.06) 217	1–7 2–7 0.91	4.99 [4.73–5.24] (0.95) 56	4.91 [4.74–5.08] (1.11) 160	(1,216) 0.20 0.00
Attitudes toward Women	2.37 [2.31–2.42] (0.39) 215	1–4 1–3 0.76	2.16 [2.04–2.29] (0.46) 55	2.44 [2.38–2.49] (0.34) 159	(1,214)[a] 22.02*** 0.09
Hostile	4.71 [4.52–4.89] (1.39) 216	1–7 2–7 0.93	4.07 [3.72–4.43] (1.31) 55	4.92 [4.71–5.12] (1.34) 160	(1,215) 15.30*** 0.07
Benevolent	4.87 [4.70–5.05] (1.31) 215	1–7 1–7 0.91	4.43 [4.08–4.78] (1.30) 54	5.02 [4.81–5.22] (1.29) 160	(1,214) 8.30** 0.04
Authoritarianism	3.95 [3.86–4.04] (0.69) 218	1–6 2–6 0.88	3.82 [3.63–4.00] (0.70) 57	3.99 [3.88–4.10] (0.69) 160	(1,217) 2.63 0.01
Fundamentalism	5.48 [5.31–5.65] (1.28) 215	1–7 1–7 0.95	5.31 [4.93–5.69] (1.44) 57	5.54 [5.34–5.73] (1.22) 157	(1,214) 1.29 0.01
Quality	6.05 [5.90–6.19] (1.05) 199	1–7 2–7 0.71	5.86 [5.55–6.18] (1.09) 48	6.10 [5.94–6.27] (1.03) 151	(1,199) 1.95 0.01
Social Desirability	4.71 [4.34–5.07] (2.68) 209	0–13 0–13 0.68	4.60 [3.89–5.31] (2.62) 55	4.75 [4.31–5.18] (2.72) 153	(1,208) 0.12 0.00

Note: Hostile = Hostile Sexism; Benevolent = Benevolent Sexism; Authoritarianism = Right-Wing Authoritarianism; Fundamentalism = Religious Fundamentalism; Quality = Quality of Experience with Sexual Minorities; SD = Impression Management Social Desirability.

* $p < .05$.

[a] Analysis of variance assume equal *n*s between the groups. This assumption was not met but the test is robust to such violations as long as variance between the groups is equal. This notation indicates that this test was adjusted for unequal variance.

** $p < .01$.

*** $p < .001$

evident in the recruitment process. Most participants self-identified as white (50%) or Asian (34%). Most identified as *heterosexual* (69%) or *mostly heterosexual* (21%) with 10% identifying as a sexual minority group member. When asked "how religious are you?", few participants described themselves as *extremely* religious (5%); 26% as *moderately* religious, 11% as *in between*, 22% as *slightly*, and 27% as *not at all* religious.

2.2. Materials

2.2.1. Attitudes toward trans people

Our dependent measure was assessed using the 21-item *Transgender Belief Survey* (TBS; Rye & Elmslie, 2001; α = 0.91) measuring opinions, ideas, and beliefs vis-à-vis trans individuals (e.g., "Schools should not hire transsexual or transgender teachers") on a 7-point Likert scale.

2.2.2. Sexuality predictors

The 20-item *Attitudes toward Lesbians and Gay Men Scale* (ATLG; Herek, 1988) was used to measure homonegativity. The 21-item *Sexual Opinion Survey* (SOS; Fisher, Byrne, White, & Kelley, 1988; Rye, Meaney, & Fisher, 2011) measured one's dispositional approach (erotophilia) or avoidance (erotophobia) of sexual content and topics. Both measures employed a 7-point Likert-type response scale.

2.2.3. Attitudes about gender

A 15-item *Attitudes toward Women scale* (ATW; based on Spence & Helmreich, 1972; Spence, Helmreich, & Stapp, 1973) measured attitudes toward the roles of women in society on a 4-point scale. Hostile sexism assessed overt or classic sexist attitudes/ideas while benevolent sexism represented covert/modern/paternalistic sexism-based attitudes, as measured by 11 items each on a 7-point response scale (Glick & Fiske, 1996).

2.2.4. Conservatism

The 24-item *Right-Wing Authoritarianism Scale* (Altemeyer, 1981) measured one's tendency to value obedience and derogate minorities on a 6-point scale. Altemeyer and Hunsberger's (1992) 20-item *Religious Fundamentalism Scale* assessed how much religion influences individuals' lives and beliefs without reference to any particular religious denomination, using a 7-point Likert-style scale. This instrument correlated strongly ($r = 0.69$) with the "how religious are you?" single item.

2.2.5. Contact with sexual and gender minorities

Participants were asked if they were personally acquainted with: a gay man, a lesbian woman, a bisexual person, a person with AIDS/HIV, an intersex person, a transsexual person, and a transgender person (definitions provided); then, participants were asked to rate the quality of the interaction with the persons with whom they were acquainted on a 7-point extremely positive-to-extremely negative scale. Each participant's scores were averaged to produce a *Quality of Experience with Sexual Minorities* score. Ninety-one percent (91%) reported knowing at least one sexual minority; average quality of the interaction experience was moderately positive.

Instruments were coded such that higher scores represented more favorable attitudes toward trans people, lesbians and gay men, and women; greater erotophilia; less hostile and benevolent sexism, authoritarianism, religious fundamentalism; and more positive experiences with sexual minorities. For all instruments, scores were calculated by averaging across their response scales.

2.2.6. Social desirability and impression management

The 13-item *Marlowe-Crowne Social Desirability Scale* (Reynolds, 1982) assessed respondents' desire to create a favorable impression. This was a dichotomous scale, with total scores ranging from 0 (no desirable responding) to 13 (greatest impression management).

2.3. Procedure

Participants (a) read an information letter and provided written consent, (b) completed the aforementioned survey materials individually in small-group settings, and (c) were debriefed and provided with the opportunity to ask questions.

3. Results

3.1. Preliminary statistical information

Means, standard deviations, tests of sex differences, and other descriptive information about the study variables are found in Table 1. Women's attitudes were more favorable than men's toward transgender issues, lesbians and gay men, and women; they were also less sexist. Individual difference variables were intercorrelated moderately strongly and, generally, demonstrated the same pattern for women and men (see Table 2). Notably, social desirability demonstrated some different patterns of correlations with the individual difference measures for men versus women (e.g., Erotophobia–Erotophilia, $r_{men} = -0.37$ versus $r_{women} = -0.04$, $z = -1.99$, $p < .05$ and Attitudes toward Women, $r_{men} = -0.27$ versus $r_{women} = 0.11$, $z = -2.22$, $p < .05$). For men, greater impression formation was related significantly to greater erotophobia and authoritarianism, as well as more negative attitudes toward lesbians, gay men, and women. For women, greater social desirability was associated with more favorable experiences with sexual minorities.

3.2. Multiple regression

The TBS was regressed upon the Attitudes toward Lesbian and Gay Men scale (ATLG), the Sexual Opinion Survey (SOS), the Attitude toward Women scale (ATW), Hostile Sexism, Benevolent Sexism, Authoritarianism, Religious Fundamentalism, Quality of Experience with Sexual Minorities, Social Desirability, and participant sex. The multiple regression equation was significant, $F(10,180) = 53.41$, $p < .0001$, $R = 0.87$, and accounted for 75% of the variance in the TBS with significant predictors of: ATLG ($\beta = 0.57$, $p < .0001$), Authoritarianism ($\beta = 0.15$, $p < .05$), Benevolent Sexism ($\beta = 0.12$, $p < .05$), and participant sex ($\beta = 0.12$, $p < .01$); see Table 3, Model 1.

Because the TBS and the ATLG were so highly correlated ($r = 0.82$, $p < .0001$), it could be argued that they overlap too much for one to be considered a predictor of the other (i.e., both are attitudes toward sexual minorities and social perceivers outside of these groups may not differentiate between transgender and sexual orientation minorities). Consequently, a second multiple regression analysis was conducted omitting the ATLG (see Table 3, Model 2). This model was also significant, $F(9,181) = 35.23$, $p < .0001$, $R = 0.80$, accounting for 64% of the TBS variance. Significant TBS predictors included: Quality of Experience with Sexual Minorities ($\beta = 0.22$, $p < .0001$), Religious Fundamentalism ($\beta = 0.17$, $p < .01$), Erotophobia–Erotophilia ($\beta = 0.17$, $p < .01$), Benevolent Sexism ($\beta = 0.17$, $p < .05$), and participant sex ($\beta = 0.17$, $p < .0001$). Authoritarianism was a marginally significant predictor ($\beta = 0.15$, $p < .055$).

Given that different predictors of transphobia are often found for men and women, we conducted the regression analyses separately for each gender (see Table 3, *Males/Females*). The analysis for men may be less accurate and have less power than for women because of the smaller sample size ($n_{males} = 45$; however, based on Austin & Steyerberg, 2015, this sample size is sufficient for estimating the coefficients but not the Multiple R^2). Including the ATLG as a predictor, the Model 1 results were remarkably similar for males and females whereby the equation for men accounted for 77% of the variance in TBS scores, while the equation for women accounted for 72% ($F_{males}(9,35) = 12.66$, $p < .0001$, $R = 0.88$; $F_{females}(9135) = 38.52$, $p < .0001$, $R = 0.85$). For men, the predictors of the TBS were: ATLG ($\beta = 0.47$, $p < .05$) and, marginally, Hostile Sexism ($\beta = 0.27$, $p < .07$). For women, the predictors were: ATLG ($\beta = 0.56$, $p < .0001$) and Benevolent Sexism ($\beta = 0.18$, $p < .05$), with Authoritarianism being marginally predictive ($\beta = 0.15$, $p < .055$). Model 2 – without the ATLG as a predictor – was also conducted for males and females separately. For men ($F_{males}(8,36) = 11.81$, $p < .0001$, $R = 0.85$), Hostile Sexism ($\beta = 0.44$, $p < .01$), Erotophobia–Erotophilia ($\beta = 0.32$, $p < .05$), and Quality of Experiences with Sexual Minorities ($\beta = 0.24$, $p < .05$) were significant predictors while Religious Fundamentalism ($\beta = 0.23$, $p = .06$) was a marginally significant predictor accounting for 72% of the variance of the TBS. For women ($F_{females}(8136) = 26.21$, $p < .0001$, $R = 0.77$), Benevolent Sexism was the strongest predictor ($\beta = 0.28$, $p < .01$) followed by Religious Fundamentalism ($\beta = 0.21$, $p < .01$), Quality of Experience with Sexual Minorities ($\beta = 0.19$, $p < .01$) and Erotophobia–Erotophilia ($\beta = 0.16$, $p < .05$) collectively accounting for 59% of the variance of the TBS.

In sum, these results are relatively consistent across sexes: Comfort with sexuality and quality of experiences with sexual minorities remained predictors for both males and females. Religious fundamentalism was a predictor for both sexes, albeit a marginally significant predictor for men. However, a noteworthy sex difference occurred for sexism: Hostile or overt sexism was predictive for males while benevolent or covert sexism was relevant for females. This difference is echoed in zero-order correlations; Men and women had similar zero-order correlations between benevolent sexism and the TBS (z test not significant) *but* men showed a significantly stronger relation between hostile sexism and the TBS ($r = 0.67$) relative to women ($r = 0.37$, Table 2; $z = -2.36$, $p < .05$).

Table 2
Correlations between predictor measures by sex.

	Attitudes toward Lesbians and Gay Men	Sexual Opinion Survey	Attitudes toward Women	Hostile sexism	Benevolent sexism	Authoritarianism	Fundamentalism	Quality	Social desirability
Attitudes toward Lesbians and Gay Men	–	0.713***	0.643***	0.560***	0.481***	0.660***	0.552***	0.493***	−0.274*
Sexual Opinion Survey	0.601***	–	0.580***	0.326*	0.438**	0.675***	0.471***	0.149	−0.368*
Attitudes toward Women	0.402***	0.417***	–	0.591***	0.470***	0.579***	0.483***	0.231	−0.270*
Hostile	0.303***	0.366***	0.610***	–	0.568***	0.504***	0.162	0.312***	0.111
Benevolent	0.587***	0.538***	0.522***	0.595***	–	0.601***	0.502***	0.177	0.160
Authoritarianism	0.565***	0.544***	0.531***	0.522***	0.740***	–	0.663***	0.402**	−0.321*
Fundamentalism	0.696***	0.565***	0.386***	0.291***	0.585***	0.663***	–	−0.016	−0.214
Quality	0.572***	0.414***	0.312***	0.180*	0.392***	0.414***	0.409***	–	−0.032
Social Desirability	−0.007	−0.041	0.112	0.147	0.093	0.043	−0.020	0.180*	–

Note: Men above the diagonal (*n* = 45–57); women below (*n* = 151–159) using pairwise deletion. Hostile = Hostile Sexism; Benevolent = Benevolent Sexism; Authoritarianism = Right-Wing Authoritarianism; Fundamentalism = Religious Fundamentalism; Quality = Quality of Interactions with Sexual Minorities; SD = Impression Management Social Desirability.

* *p* < .05.
** *p* < .01.
*** *p* < .001.

Table 3
Individual difference variables as multiple regression predictors of the Transgender Belief Scale.

Individual difference predictors	All participants			Males			Females		
		Model 1	Model 2		Model 1	Model 2		Model 1	Model 2
	r	ß	ß	*r*	ß	ß	*r*	ß	ß
Attitudes toward Lesbians and Gay Men	0.82***	0.57***	–	0.82***	0.47*	–	0.80***	0.56***	–
Sexual Opinion Survey	0.55***	0.04	0.17**	0.62***	0.10	0.32*	0.59***	0.06	0.16*
Attitudes toward Women	0.56***	0.04	0.09	0.62***	0.01	0.00	0.46***	0.06	0.08
Hostile	0.50***	0.03	0.07	0.67***	0.27†	0.44**	0.37***	−0.05	−0.06
Benevolent	0.65***	0.12*	0.17†	0.55***	−0.03	−0.07	0.66***	0.18*	0.28*
Authoritarianism	0.66***	0.15†	0.15†	0.68***	0.15	0.10	0.65***	0.15†	0.12
Fundamentalism	0.57***	−0.02	0.17**	0.45***	0.06	0.23†	0.64***	−0.01	0.21**
Quality	0.50***	0.04	0.22***	0.45***	0.06	0.24*	0.52***	0.03	0.19**
Social Desirability	0.02	0.05	0.00	−0.12	0.09	0.05	0.07	0.05	0.01
Gender	0.30***	0.12**	0.17***	–	–	–	–	–	–

Note: *r* = zero-order correlation; ß = Standardized beta. Multicollinearity was not problematic based on tolerance and variance inflation factor statistics. The data were subject to a missing value analysis; the Little's MCAR test was not significant (Chi^2(72) = 75.86, ns) indicating that missing data was missing completely at random. Consequently, pairwise –which was used in the correlations presented in Table 2– and list wise case deletion were used (Garson, 2015). SOS = Sexual Opinion Survey/erotophobia—erotophilia; Hostile = Hostile Sexism; Benevolent = Benevolent Sexism; Authoritarianism = Right-Wing Authoritarianism; Fundamentalism = Religious Fundamentalism; Quality = Quality of Interactions with Sexual Minorities; SD = Impression Management Social Desirability; Gender = Participant Gender (dummy coded, male = 1, female = 2).

* *p* < .05.
** *p* < .01.
*** *p* < .001.
† marginal significance, *p* < .07.

4. Discussion

Consistent with integrated threat theory, beliefs about transgender individuals can be predicted through different facets of conservatism, including religious fundamentalism, benevolent sexism, erotophobia, and, marginally, authoritarianism. Trans people may evoke discomfort and/or threaten conservative belief systems regarding sexuality and gender roles. Novel findings from this study indicate that an expanded definition of conservatism (including gender and sexual conservatism, e.g., erotophobia) may be warranted, as conservative variables tend to hang together (for example, sexual comfort is strongly correlated to authoritarianism and attitudes toward women) and predict trans attitudes well.

This was one of the first studies to assess quality of contact with sexual minorities as a predictor, finding that it was predictive of transphobia. Previous studies that have explored contact with sexual minorities tended to use a binary-coded variable (e.g., yes/no); some found no relation to trans attitudes (e.g., Elischberger et al., 2018),

some found small effects (e.g., King et al., 2009), and others used *t*-tests to measure group differences, finding significant effects (e.g., Norton & Herek, 2013; Tee & Hegarty, 2006). Given that our measure yielded a continuous variable, we were able to include it in our regression analyses, finding that quality of contact with sexual minorities was predictive of transphobia (when the ATLG was not included as a predictor). Our findings are similar to Scandurra et al. (2017), who found that having a friend who is trans was a significant predictor of trans attitudes. These findings are consistent, given that a friendship is likely to indicate positive interactions with trans individuals.

This finding is not only evidence for the contact hypothesis (King et al., 2009), but also for secondary transfer theory (Pettigrew, 2009); having a positive interaction with any sexual minority (including gay people) is likely to result in more positive impressions of any sexual minority (including trans people). Perhaps this is evidence that participants may not differentiate between queer subgroups. Further evidence of this idea is seen in the high correlations between homophobia and transphobia. Attitudes toward gay men and lesbians also

demonstrated the strongest beta weights within multiple regression equations, usurping other individual difference variables' predictive ability. The ATLG and TBS may be distinct yet overlapping measures of a latent construct of sexual minority prejudice. However framed, homophobia is likely to always be the "best" predictor of transphobia and these two constructs probably share a common foundation (Nagoshi et al., 2008).

Perhaps as a result of measuring previously unexplored variables (comfort with sexuality and quality of contact with sexual minorities), we were able to explain considerably more variance in trans attitudes relative to prior studies (cf., Norton & Herek, 2013; Scandurra et al., 2017; Tee & Hegarty, 2006). While quality of interactions may be an improvement over a simple sexual minority acquaintanceship count, the measurement of quality of sexual minority interactions could be refined further and this novel finding must be replicated in future studies.

In addition, people who are female are more transpositive; this is potentially a function of transpeople threatening hegemonic masculinity at many levels (e.g., Abramovich, 2017). When analyses were conducted separately by sex, the results were consistent: Comfort with sexuality and quality of experience with sexual minorities were implicated in attitudes toward transpeople. Religious fundamentalism demonstrated an almost identical beta coefficient for both sexes. The major difference was regarding the role of sexism; Hostile or overt sexism was a strong and critical predictor for males but not females. For females, benevolent or covert/modern sexism was a significant predictor. Hostile sexism may be a more relevant construct, overall, for males because the prejudice expressed is toward an outgroup whereas hostile sexism expressed by females involves an internalized or self-directed hatred/hostility (Glick & Fiske, 2001). Thus, it is not surprising that males and females differed in their ratings of gender-related individual differences (i.e., hostile and benevolent sexism, attitudes toward women) in addition to the differential role these constructs play in explaining attitudes toward trans people.

This study is limited by the use of an undergraduate student sample. Participants were young and primarily female. Religiosity in this undergraduate sample was similar, however, to representative samples of their peer groups (cf. Dilmaghani, 2018). In addition, a study by Hanel and Vione (2016) finds that student samples are as heterogeneous as representative samples. However, further studies should be conducted to test these predictors in non-student samples. In addition, due to the relatively low number of men, the gender comparison should be taken with caution. While we posit that these individual differences underlie attitudes, the design was correlational. Further research may explore the underlying mechanisms of transphobia (e.g., challenging value or moral systems; Haidt & Graham, 2007). Despite its shortcomings, this study is an important step toward developing a more nuanced understanding of the psychological underpinnings of attitudes toward trans people.

Those who are attempting to ameliorate the attitudinal landscape for transfolks should consider the sexual comfort, gender-related beliefs, and overall conservative orientation of those people who engage in judgements about trans issues. It is likely that those who seek to learn more about trans people are not conservative in orientation. Perhaps sex educators may consider inclusivity workshops, including facilitating positive experiences with sexual minorities (e.g., Walch et al., 2012) and activities to foster cognitive flexibility (e.g., Moss-Racusin & Rabasco, 2018) in groups of people who are likely to hold conservative views (e.g., religious communities) or in communities of men (e.g., single-gender sporting leagues).

Acknowledgements

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